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(Hidden)

Research Domain, discipline, and sub-discipline

Computer Science, computer networks, mobile

Title of Submission

Response to RFI

Abstract (maximum ~200 words).

Cyberinfrastructure continues to grow in importance to our society, for good and for ill. Without specific focus on this domain, across technology, policy, practices, and discipline research, we risk losing leadership position.

Question 1 Research Challenge(s) (maximum ~1200 words): Describe current or emerging science or engineering research challenge(s), providing context in terms of recent research activities and standing questions in the field.

From my position working with technology broadly across a university, the largest challenge I see is the lack of communication across the silos that have developed, whether that be best practices, sharing of solutions, or sharing of infrastructure. In the past, NSF has supported workshops that had as focus the connections between campuses and between research labs (Campus Bridging). In the larger CI field as far as I know, we have not initiated these discussions. We have made great progress in creating technologies and using them in specific disciplines. But campuses in general still see these technologies in isolation.

Question 2 Cyberinfrastructure Needed to Address the Research Challenge(s) (maximum ~1200 words): Describe any limitations or absence of existing cyberinfrastructure, and/or specific technical advancements in cyberinfrastructure (e.g. advanced computing, data infrastructure, software infrastructure, applications, networking, cybersecurity), that must be addressed to accomplish the identified research challenge(s).

I have few solutions, but I have questions. How can NSF help to focus our community (broadly) on bringing together the silos?

Question 3 Other considerations (maximum ~1200 words, optional): Any other relevant aspects, such as organization, process, learning and workforce development, access, and sustainability, that need to be addressed; or any other issues that NSF should consider.

People continue to be the overwhelmingly scarce resource. We will not develop the people we need to support the complex areas of CI unless we make changes in our overall education system starting in K-12.

Consent Statement